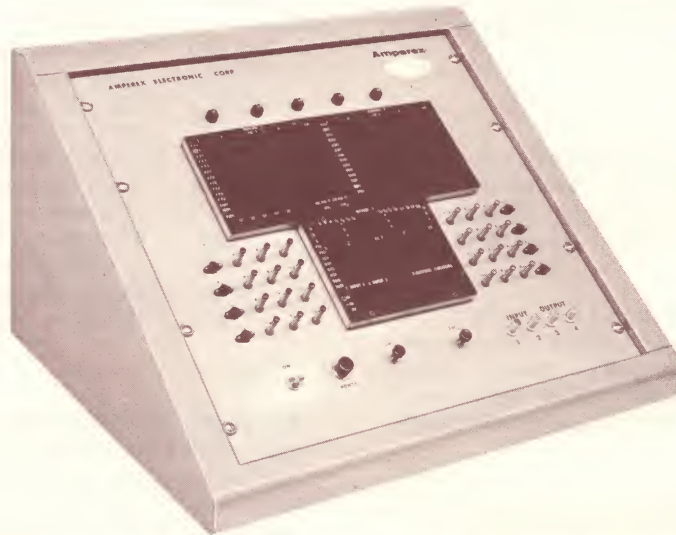




DT-100 DIGITAL TRAINER



The Amperex DT-100 Digital Trainer is designed for use by technical training facilities as an aid in understanding digital design techniques and for use by engineering design facilities for simplification of laborious breadboard wiring problems.

In the field of technical training the DT-100 will aid instruction by providing a simple means of connecting digital circuits without encumbering students with extensive wiring requirements. The DT-100 provides means of connecting visual indication of circuit oper-

ation and, in addition, provides a simple method for connecting circuitry including loading requirements and transistor circuits.

The use of the DT-100 in engineering laboratories will substantially reduce time requirements for wiring of digital circuits in the design and testing stage. A typical design of a digital circuit which requires two days of wiring by normal soldering methods could be accomplished in a few hours using the DT-100 with appropriate Amperex Circuit Blocks and patch cords.

Physical Description

Mechanical

The DT-100 is housed in a blue and silver metal cabinet whose overall dimensions are:

Width	:	22 inches
Height	:	12-1/4 inches
Depth	:	17-1/2 inches

Front Panel

The front panel has been human-engineered for ease of use. The panel extends from bottom front to top rear at a convenient 30° slope.

Three patch boards with 300 contacts per board, provide extreme flexibility for connecting any digital circuit. Visual indication of the physical outputs of circuits such as shift registers and counters can be obtained by connecting any of the five indicator lamps (located above the patch boards) to the desired circuit output with a patch cord.

Twenty four push-post terminals located on either side of the lower patch board provide the required flexibility for connection of external circuitry and components. In addition, eight transistor sockets (four on each side of the lower patch board) are provided for use in conjunction with the push-post terminals. Internal wiring connects the sockets and push-post terminals to specific contacts on the patch boards.

In the lower left portion of the panel is the power switch and indicating lamp. In the lower center are two micro-switches which can be used for any function such as manual input, reset, and voltage level switching.

Four BNC female connectors, two for electrical inputs and two for monitoring outputs or driving remote circuitry, are located in the lower right portion of the panel. The function of the input and output connectors are interchangeable merely by proper connection at the patch boards.

Electrical Description

Inputs

The DT-100 plugs into a standard 120 volt AC line. The only other input required is a pulse generator which can be obtained by connecting the appropriate internal circuitry if desired.

Internal Circuitry

An internal power supply provides the required drive for the circuit blocks within the training set. The power supply is internally fused and, together with the rear panel fuse, double fuse protection is provided for the trainer set.

A maximum of 72 Amperex Circuit Blocks form the internal digital circuitry of the Digital Trainer Set. These circuit blocks are mounted on printed circuit cards, PC-100, which plug into mating connectors. The connectors are internally wired to the patch boards.

Standard Digital Trainer Set

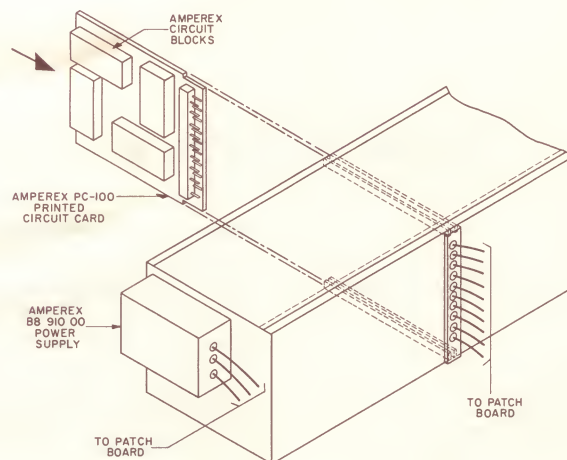
The standard DT-100 circuit block complement has been selected to provide a unit with the most versatile capability for logic circuit design. Included with the standard set are:

1. 100 Patch Cords of varied lengths.
2. 72 Circuit Blocks as follows:

<u>Type</u>	<u>Description</u>	<u>Quantity</u>
FF1	Flip Flop	12
FF2	Flip Flop (built in gate circuit)	10
2.3N1	Twin Negative Gate (6 input)	6
2.3P1	Twin Positive Gate (6 input)	6
2PL1	Twin Pulse Logic	6
2EF1	Twin Emitter Follower	6
2IA1	Twin Inverter Amplifier	6
2EF2	Twin Emitter Follower (diode outputs)	4
2IA2	Twin Inverter Amplifier (2 output)	4
PS1	Pulse Shaper	6
OS1	One Shot Multivibrator	6
TOTAL		72

For particular applications, a circuit block configuration other than that supplied in the standard trainer may be desired. Variations in the standard set can be arranged with special circuit block complements selected from the complete line of Circuit Blocks as listed in the Amperex catalog and price sheet.

Broader capabilities can be obtained for any DT-100 Digital Trainer by selecting additional printed circuit cards and circuit blocks. The circuit cards can then be replaced and interchanged as dictated by individual requirements.



Installation of Printed Circuit Card, PC-100 Into
DT-100 Trainer